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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PAUL ANTHONY THOMAS

Appeal 2008-1427
Application 10/763,955
Technology Center 3600

Decided: November 21, 2008

Before JENNIFER D. BAHR, LINDA E. HORNER, and STEFAN
STAICOVICI *Administrative Patent Judges*.

STAICOVICI, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Paul Anthony Thomas (Appellant) appeals under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1 through 11. We have jurisdiction over this appeal under 35 U.S.C. § 6 (2002).

THE INVENTION

The Appellant's invention is drawn towards a brake pad assembly including a pad spring 124 provided with slots 152, a backplate 134 having circumferentially spaced abutments 140, and lugs 150 that engage with slots 152 (¶ 21 and figs. 4 and 5). The pad spring 124 has upturned ends 142 that come into contact with the abutments 140 on the backplate 134 such that upturned ends 142 are prevented from sliding over the abutments 140 (¶ 21 and fig. 5A). When in use, the upturned ends 142 slide outwardly until they come into contact with the abutments 140 to thereby constitute a first "leaf spring" mode of operation (¶ 25 and fig. 6). When the load is increased, because the movement of the upturned ends 142 is restrained by the abutments 140, the spring pad 124 enters a second "buckling" mode of operation (¶ 26 and fig. 6).

Claim 1 is representative of the claimed invention and reads as follows:

1. A disc brake pad backplate assembly comprising:
 - a backplate including circumferentially spaced abutments separated by a distance;
 - a pad spring including end portions and a central portion between the end portions, wherein the circumferentially spaced abutments of the backplate restrain lateral movement of the end portions of the pad spring; and
 - a retaining feature to mount the pad spring to the backplate, wherein at least one of the backplate and the pad spring includes the retaining feature,

wherein the pad spring is dimensioned relative to the distance between the circumferentially spaced abutments such that a radially inward loading applied at the central portion of the pad spring causes the pad spring to function in a first resilient leaf spring-like mode where the end portions of the pad spring are unrestrained up to a predetermined load limit, and wherein above the predetermined load limit the end portions of the pad spring are restrained by the circumferentially spaced abutments of the backplate and the pad spring functions in a second buckling mode, and

wherein a first spring rate of the pad spring in the first resilient leaf spring-like mode is lower than a second spring rate of the pad spring in the second buckling mode.

THE REJECTIONS

The Examiner relies upon the following as evidence of unpatentability:

Fischer (as translated) WO92/00465 Jan. 9, 1992

The Appellant seeks review of the Examiner's rejection of claims 1 through 11 under 35 U.S.C. § 102(b) as anticipated by Fischer.

THE ISSUE

Did the Examiner err in finding that Fischer discloses a disc brake pad assembly having a pad spring dimensioned relative to the distance between circumferentially spaced abutments such that (1) the pad spring is laterally restrained by the circumferentially spaced abutments and (2) operates in a

second buckling mode of operation. For the reasons set forth in our discussion below, we are not persuaded by the Appellant's arguments.

Accordingly, we AFFIRM the Examiner's rejection.

FINDINGS OF FACT

Fischer

We make the following findings of fact with respect to Fischer:

1. Fischer discloses a disc brake pad backplate assembly including a backplate 1 (pad carrier) having circumferentially spaced abutments 17 (brackets), a pad spring 5, and retaining features 19 (holding brackets) (fig. 1).
2. The retaining features 19 (holding brackets) engage with slots 21 (recesses) of the pad spring 5 for mounting the pad spring 5 to the backplate 1 (Page 7, ll. 6-11; Page 8, ll. 8-9; and figs. 1 and 2).
3. When the spring pad 5 is installed on the backplate 1 (pad carrier) the two outer edges of the slots 21 (recesses) have no contact with the retaining features 19 (holding brackets) (Page 8, ll. 6-12 and fig. 1).
4. The ends 29 of the pad spring 5 are rounded toward the top in such a way that "the ends [29] lie at the transition to brackets 17" (Page 9, ll. 7-9 and fig. 1).
5. The ends 29 of the spring pad 5 are rounded toward the top such as to contact the abutments 17 (fig. 1).

PRINCIPLE OF LAW

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). It is not necessary that the reference teach what the subject application teaches, but only that the claim read on something disclosed in the reference, i.e., that all of the limitations in the claim be found in or fully met by the reference. *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 772 (Fed. Cir. 1983)

OPINION

The Appellant argues all the claims rejected under 35 U.S.C. § 102(b) together as a group. Therefore, in accordance with 37 C.F.R. § 41.37(c)(1)(vii) (2007), we have selected claim 1 as the representative claim to decide the appeal of the anticipation rejection, with claims 2 through 11 standing or falling with claim 1.

The Appellant argues that in contrast to the claimed invention where the pad spring operates in a first resilient leaf-spring mode and in a second buckling mode, the pad spring of Fischer "only operates in a leaf spring-like mode, and . . . does not operate in a buckling mode as claimed" (App. Br.¹ 3-4). More specifically, according to the Appellant, Fischer does not disclose that the pad spring is laterally restrained by the circumferentially spaced abutments (App. Br. 4 and Reply Br. 2). In response, the Examiner asserts

¹ We refer herein to the Appeal Brief ("App. Br."), filed October 17, 2005, the Reply Brief ("Reply Br."), filed February 15, 2006, and the Examiner's Answer ("Ans."), mailed December 22, 2005.

that the pad spring of Fischer and the pad spring of the claimed invention “appear to be identical in both structure and function” (Ans. 4). In other words, the Examiner appears to take the position that because there is no substantial difference between the construction of the Appellant’s disc brake pad backplate assembly and that of Fischer, the operation of the Appellant’s invention is the same as that of the disc brake pad backplate assembly of Fischer. We agree with the Examiner.

We note, at the outset, the similarity between Appellant’s Figure 5 and Fischer’s Figure 1. As evidenced above, the disc brake pad backplate assembly of Fischer includes a pad spring 5, a backplate 1 having circumferentially spaced abutments 17, and retaining features 19 that engage with slots 21 of the pad spring 5 (Findings of Fact 1 and 2). Furthermore, the two outer edges of the slots 21 have no contact with the retaining features 19, and the ends 29 of the pad spring 5 are rounded towards the top (Findings of Fact 3 and 4). Fischer therefore discloses the structure recited in claim 1. Since the two outer edges of the slots 21 have no contact with the retaining features 19, and the ends 29 of the pad spring 5 are rounded towards the top, we agree with the Examiner that the pad spring 5 is capable of “sliding along the curved portion of the backing plate (1) to [*sic*: in] a first spring-like mode” (Ans. 4). Moreover, because “the ends [29] lie at the transition to brackets 17,” a person ordinarily skilled in the art would reasonably understand that this language implies that the pad spring is “dimensioned relative to the distance between circumferentially spaced abutments,” as required by claim 1. Furthermore, if the “the ends [29] lie at the transition to brackets 17” (Finding of Fact 4), the pad spring 5 is laterally restrained by the circumferentially spaced abutments 17. Hence, we agree

with the Examiner that “the spring ends [29] abut and are restrained by the abutments (17) in a second buckling mode” (Ans. 4).

The Appellant additionally argues that when the spring ends 29 come into contact with the abutments 17 in Fischer, in contrast to the claimed invention, the ends are not restrained by the abutments but rather slide over the abutments (Reply Br. 2-3). The Appellant’s argument is unpersuasive for two reasons. First, the Appellant has not provided any objective evidence that the spring ends 29 of Fischer necessarily slide over the abutments 17. The arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602 (CCPA 1965). Second, we note the similarity between the Appellant’s Figure 5A and Fischer’s Figure 1. The ends 142 of the Appellant’s pad spring 124 are rounded (chamfered) and come into contact with the abutments 140 (fig. 5A). Similarly, the ends 29 of the pad spring 5 in Fischer are rounded towards the top (chamfered) to come into contact with the abutments 17 (Finding of Fact 5). We find no substantial difference between the construction of the ends 142 and the abutments 140 of the Appellant’s pad spring 124, and the ends 29 and the abutments 17 of Fischer’s pad spring 5. Therefore, we find nothing in Fischer that would lead a person of ordinary skill in the art to conclude that the ends of Fischer’s pad spring are any more likely to slide over the corresponding abutments (brackets) than the Appellant’s. Moreover, a person ordinarily skilled in the art would reasonably infer a functional significance to Fischer’s explicit teaching that “the ends [29] lie at the transition to brackets 17” (Finding of Fact 4), namely, the functional capability of the ends 29 of Fischer’s pad spring 5 to abut and be restrained by the abutments 17 (brackets) upon further stressing of the pad spring 5.

In light of the above, the Appellant's arguments fail to demonstrate error in the Examiner's rejection of claim 1. We thus sustain the rejection of claim 1 and claims 2-11 standing or falling with claim 1.

DECISION

The decision of the Examiner to reject claims 1-11 under 35 U.S.C. § 102(b) as anticipated by Fischer is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED

hh

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